

PUBLICATION LIST

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- (1) *Ehrhart polynomial for lattice squares, cubes and hypercubes*, *Revue Roumaine de Mathématique Pures et Appliquées*, **xx**(1) (2019), pp. 57-80
- (2) *Random triangles in planar regions containing a fixed point*, *Rend. Circ. Mat. Palermo* **68**(2019), Issue 2, pp. 363-383
- (3) *A variation on bisecting the binomial coefficients*, *Discrete Applied Mathematics*, **250**(2018), pp. 276-284
- (4) *Apollonius "circle" in Hyperbolic Geometry*, *Forum Geometricorum*, **18** (2018), pp. 135-140
- (5) *Bisecting binomial coefficients*, with T. Martinsen and P. Stănică, *Discrete Applied Mathematics*, **227**(2017), pp. 70-83
- (6) *Gaussian Integers and Unit Fractions*, with K. Bradford, *Acta Math. Univ. Comenianae*, **LXXXVI** (2017), pp. 127-141
- (7) *New parametrization of $A^2 + B^2 + C^2 = 3D^2$ and Lagrange's four-square theorem*, *An. Științ. Univ. Al. I. Cuza Iași. Mat. (N.S.)*, vol. **62**(3) (2016), pp. 823-833
- (8) *The signum equation for Erdős-Surányi sequences*, with Dorin Andrica, vol. **15A** (2015): *Proceedings of Integers 2013: The Erdos Centennial Conference*
- (9) *A geometric reduction of the Erdős-Straus conjecture*, with Kyle Bradford, *Advanced Modeling and Optimization*, **17**(1) (2015), pp. 41-54
- (10) *Equilateral triangles in \mathbb{Z}^4* , *Vietnam J. Math.* vol. **43**(3) (2015), pp. 525-539
- (11) *On a conjecture on the number of polynomials with coefficients in $[n]$* , with Dorin Andrica, Sneha Chaubey, and Alexandru Zaharescu, *Bull. Math. Soc. Sci. Math. Roumanie*, vol. **58**(106) (2015), pp. 19-31
- (12) *Some unexpected Connections between Analysis and Combinatorics*, with Dorin Andrica, *Mathematics without boundaries: survey in pure mathematics*, Themistocles M. Rassias and Panos Pardalos, Editors, Springer (2014)
- (13) *On polynomials with coefficients in $[n]$* , with Dorin Andrica, *An. St. Univ. Ovidius Constanta*, Vol. **22**(1), 2014, 13-23
- (14) *Primes of the form $\pm a^2 \pm qb^2$* , with Jeff Patterson, *Stud. Univ. Babes-Bolyai Math.* **58** (2013), No. 4, pp. 421-430

- (15) *Estimations of the Rate of Interest for an Annuity Certain*, with R. Stephens, *Journal of Financial and Economic Practice*, **13(2)**(2013), pp. 84-97
- (16) *Lattice Platonic Solids and their Ehrhart polynomial*, *Acta Math. Univ. Comenianae*, **82(1)** (2013), pp. 147-158
- (17) *Ehrhart's polynomial for equilateral triangles in \mathbb{Z}^3* , *Australas. J. Combinatorics*, **55** (2013), pp. 189-204
- (18) *Things to do with a broken stick*, with Gabriel Prajitura, *International Journal of Geometry*, vol. **2(2)** (2013), pp. 5 - 30
- (19) *Cubes in $\{0, 1, \dots, n\}^3$* , with Rodrigo Obando, *Integers*, vol. **12A** (2012) (John Selfridge Memorial Issue), Art. A9
- (20) *Regular octahedrons in $\{0, 1, \dots, n\}^3$* , *Fasc. Math.*, **48** (2012), pp. 49-59
- (21) *Moments and the Range of the Derivative*, with Richard Stephens, *Real Analysis Exchange*, **37(1)** (2012), pp. 1-17
- (22) *Half domination arrangements in regular and semi-regular tessellation type graphs*, *Advanced Modeling and Optimization*, **14(1)** (2012), pp. 233-245
- (23) *Regular tetrahedra with integer coordinates of their vertices*, *Acta Math. Univ. Comenianae*, **80(2)** (2011), pp. 161-170
- (24) *On the Erdos-Straus conjecture*, with A. Wilson, *Revue Roumaine de Mathematique Pures et Appliques*, **56(1)** (2011), pp. 21-30
- (25) *Platonic solids in \mathbb{Z}^3* , with A. Markov, *J. Number Theory*, **131** (2011), pp. 138-145
- (26) *On positivity of bivariate polynomials*, *Gazeta Matematica (Seria A)*, Anul XXVIII(CVII) **3-4** (2010), pp. 134-136
- (27) *Certain Binomial Sums with recursive coefficients*, with E. Kilic, *Fibonacci Quart.*, **48(2)** (2010), pp. 161-167
- (28) *On independent sets in purely atomic probability spaces with geometric distribution*, with A. Stancu, *Acta Math. Univ. Comenianae*, **79(1)** (2010), pp. 31-38
- (29) *Introduction to the Prisoners vs. Guards Puzzle*, with T. Howard and D. Woolbright, *Journal of Integer Sequences*, **12** (2009), Art. 09.1.3
- (30) *A characterization of regular tetrahedra in \mathbb{Z}^3* , *J. Number Theory*, **129** (2009), pp. 1066-1074
- (31) *k-Dependence and domination in king's graph*, with D. Pritkin and S. Wright, *Amer. Math. Monthly*, **115(9)**, (2008), pp. 820-836
- (32) *Twin problems on non-periodic functions*, *Crux Mathematicorum with Mathematical Mayhem*, **34(7)** (2008), pp. 424-429
- (33) *A characterization of all equilateral triangles in \mathbb{Z}^3* , with Ray Chandler, *Integers*, **8** (2008), Art. A19

- (34) *Minimal Niven numbers*, with F. Luca, P. Stanica and H. Fredricksen, *Acta Arith.*, **132** (2008), pp. 135-159
- (35) *Counting all equilateral triangles in $\{0, 1, 2, \dots, n\}^3$* , *Acta Math. Univ. Comenianae*, **77**(1) (2008), pp. 129-140
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- (38) *A parametrization of equilateral triangles having integer coordinates*, *Journal of Integer Sequences*, **10** (2007), Art. 07.6.7
- (39) *Heron triangles with two fixed sides*, with F. Luca and P. Stanica, *J. Number Theory*, **126**(1) (2007), pp. 52-67
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- (41) *Simultaneous Translational and Multiplicative Tiling and Wavelet Sets in \mathbb{R}^2* , with Yang Wang, *Indiana Univ. Math. J.*, **55**(6) (2006), pp. 1935-1949
- (42) *On ring homomorphisms of $C(\mathbb{R})$ whose range consists of smooth functions*, *Gazeta Matematica, A series*, **4**, 2006
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- (51) *On the structure of operators and wavelets*, thesis, Texas A&M University, (1997)
- (52) *On power bounded operators*, *Proc. Amer. Math. Soc.*, **125** (1997), pp. 1435-1441

- (53) *Jordan decomposition and factorization for nonnegative operator-valued functions*, Rev. Roumaine Math. Pures Appl., **37** (1992), pp. 691-699.
- (54) *Joint spectral properties for permutable linear transformations*, with F.-H. Vasilescu, J. Reine Angew. Math. **426** (1992), pp. 23-45

Future work/projects

- (1) “*Problems from the MAA journals*”, *Mathematics Problems for Undergraduates*, a textbook
- (2) *Differential Equations, lecture notes*, ejionascu.ro/textbooks/diffeqbook.pdf
- (3) *Lecture Notes in Number Theory*, */notes/ntbook.pdf
- (4) *Wavelets sets in \mathbb{R}^n associated with non-expansive dilation matrices*
- (5) *The basics of calculus with emphasis on transcendental functions* */notes/calcInotes.pdf
- (6) *Lecture Notes in Discrete Mathematics*, */notes/dmln.pdf
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- (8) *Putnam Training Problems and Solutions*
- (9) *Lecture Notes in Abstract Algebra*

Published Proposed Problems or Solutions

- (1) *Solution to Problem 1143*, *The College Math. J.*, **51**(1) (2020), p. 69
- (2) *Proposed Problem 4485*, with Jonathan Parker, *CruX Mathematicorum*, **45**(9), November 2019
- (3) *Proposed Problem 1153*, *The College Math. J.*, **50**(3) (2019), p. 225
- (4) *Proposed Problem 1148*, *The College Math. J.*, **50**(2) (2019), p. 143
- (5) *Solution to Problem 1346*, with Christopher Lane, *Pi Mu Epsilon*, **14** (9), Fall 2018, pp. 605-608
- (6) *Proposed Problem 4293*, *CruX Mathematicorum with Mathematical Mayhem*, **43**(10) (2017)
- (7) *Proposed Problem 459*, *Gazeta Matematica, Seria A*, vol. **114**, no. 1-2 (2017), p. 34
- (8) *Proposed Problem 1088*, *The College Math. J.*, **48**(5) (2017), p. 373
- (9) *Solution to Problem 1084*, with John Zacharias, *The College Math. J.*, **48**(4) (2017), p. 297
- (10) *Proposed Problem 1099*, with K. Apple, *The College Math. J.*, **48**(2) (2017), p. 139
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- (12) *Proposed Problem 1088*, *The College Math. J.*, **47**(5) (2016), p. 369
- (13) *Proposed Problem 4002*, with K. Apple, *CruX Mathematicorum with Mathematical Mayhem*, **42**(1) (2016)
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- (24) *Solution to Problem 11366*, Amer. Math. Monthly, **117**(3) (2010), pp. 280-281
- (25) *Solution to Problem 1204*, Π ME Journal, (2010) (issue 1), pp. 3-4
- (26) *Proposed Problem 11443*, Amer. Math. Monthly, **116**(6) (2009), pp. 548
- (27) *Solution of problem 878*, *The College Math. J.*, **3** (2009), p. 218

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